


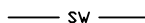






24 BEACH ROAD, COLLAROY

STORMWATER MANAGEMENT PLAN

DRAWING INDEX:

- SW-000 LEGEND
- SW-001 PIPE LAYOUT
- SW-002 PIPE LAYOUT – ROOF
- SW-100 DETAILS
- SW-200 SITE AREAS


LEGEND:

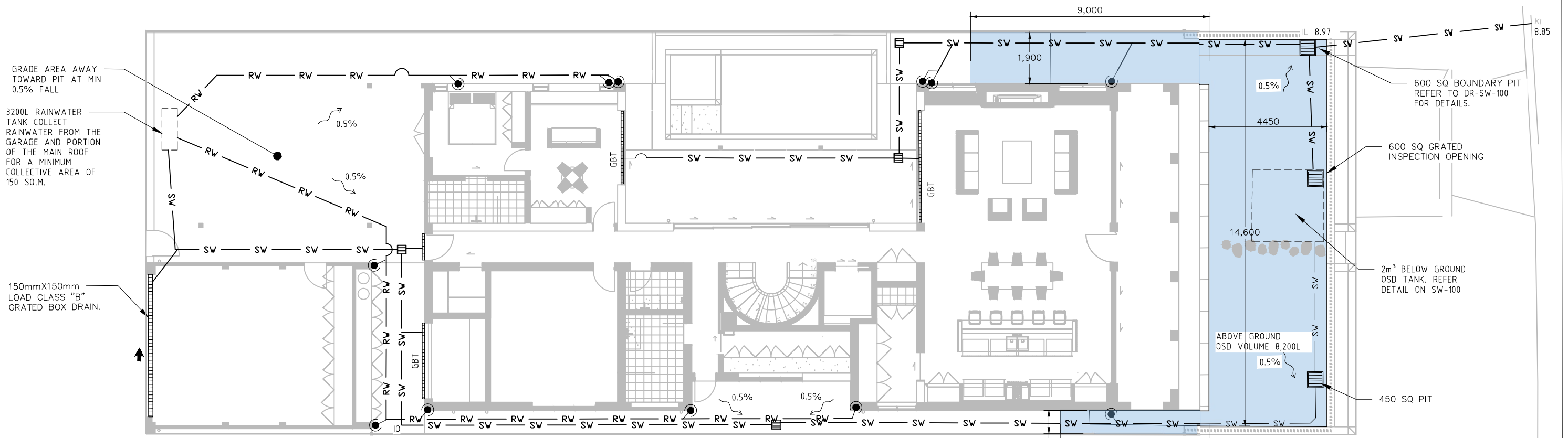
-  DOWNPIPE
-  SW STORMWATER PIPE
-  RW RAINWATER PIPE
-  DRAINAGE PIT
-  RAINWATER OUTLET
-  PLANTERBOX DRAIN
-  GBT 100x100 GRATED BOX DRAIN UNO
-  IO INSPECTION OPENING

NOTES:

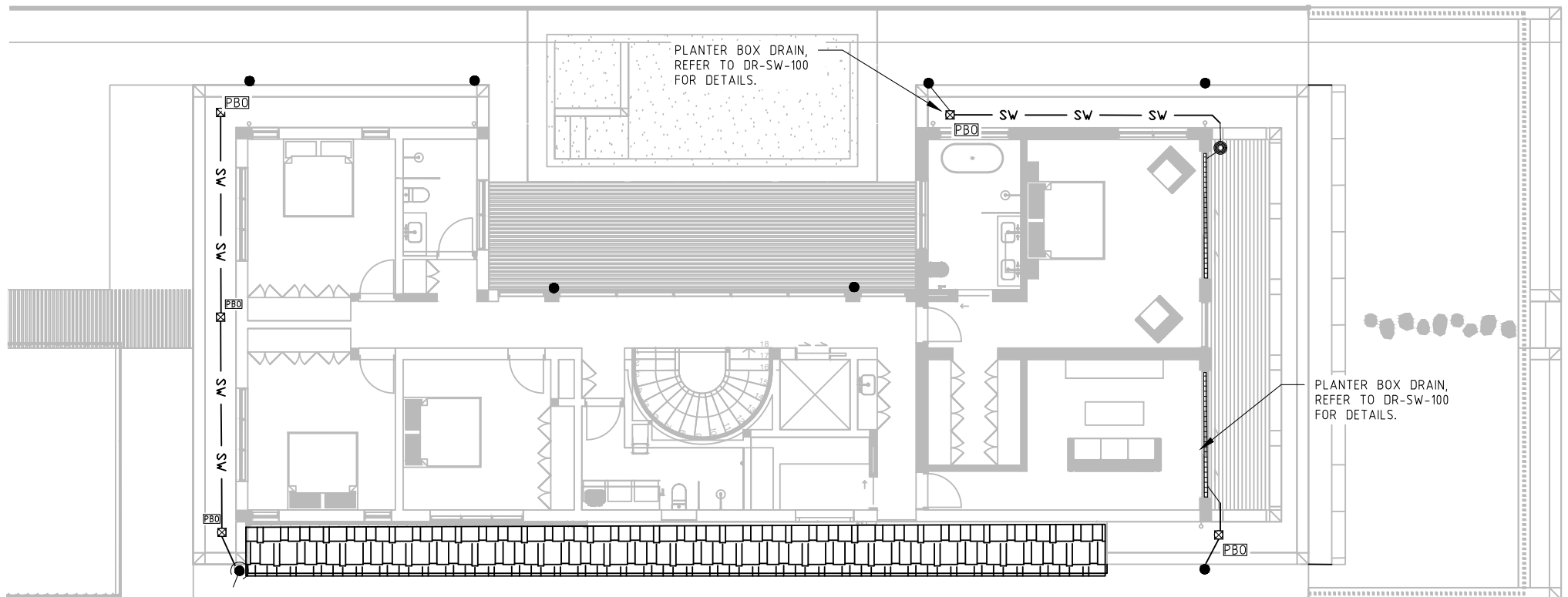
1. ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.
2. SITE LAYOUT BASED ON ARCHITECTURAL PLANS BY RAMA ARCHITECTS PTY LTD (11/10/2024) AND SURVEY PLANS BY TRUE NORTH SURVEYS (11/10/2021).
3. LOCATION OF ALL SERVICES MUST BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.
4. ALL STORMWATER DRAINAGE PIPES AND ASSOCIATED DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE RELEVANT STANDARDS, THE BUILDING CODE OF AUSTRALIA, MANUFACTURER'S RECOMMENDATIONS, SYDNEY CATCHMENT AUTHORITY RECOMMENDED PRACTICE, AND LOCAL COUNCIL, AS APPLICABLE.
5. ALL INVERT LEVELS PROVIDED ON THIS DRAWING ARE REDUCED TO AHD AND BASED ON INTERPOLATED SURFACE LEVELS AND SYSTEM REQUIREMENTS.
6. WHERE POSSIBLE, PIPEWORK SHALL BE LOCATED EXTERNAL TO THE BUILDING.
7. DOWNPIPES AND STORMWATER LINES TO BE SEALED DN100 uPVC UNLESS OTHERWISE NOTED.
8. STORMWATER PIPES TO BE GRADED AT A MINIMUM 1% UNLESS NOTED OTHERWISE.
9. ALTERNATIVE GUTTER AND DOWNPIPE CONFIGURATION MAY BE INSTALLED PROVIDED IT COMPLIES WITH AS3500.
10. ALL PIPE AND CONDUITS TO BE MARKED IN ACCORDANCE WITH AS1345 – 1995.
11. TRENCHES AND SERVICE SEPARATIONS IN ACCORDANCE WITH AS/NZS 5601, AS/NZS 3500, AND AS/CA S009.

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NA				DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED				DESIGNED DD CHECKED LES								LEGEND			
1 AB 08/11/2024 APPROVED FOR DA SUBMISSION FRM 0 DD 30/10/2024 APPROVED FOR DA SUBMISSION LES								DRAWN DD CHECKED LES				APPROVED LES DATE 08/11/2024							
No. BY DATE DESCRIPTION APPD												Size A3		Status FOR DEVELOPMENT APPLICATION		Dwg No. P171413-DR-SW-000		Rev. 1	



PLAN 1 PIPE LAYOUT-GROUND FLOOR
1:150



PLAN 2 PIPE LAYOUT-SECOND FLOOR
1:150

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REVISIONS	No.	BY	DATE	DESCRIPTION	APPD
	2	DD	14/11/2024	APPROVED FOR DA SUBMISSION	FRM
	1	AB	08/11/2024	APPROVED FOR DA SUBMISSION	FRM
	0	DD	30/10/2024	APPROVED FOR DA SUBMISSION	LES

Scale
1:150
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APPROVED	LES	DATE	14/11/2024






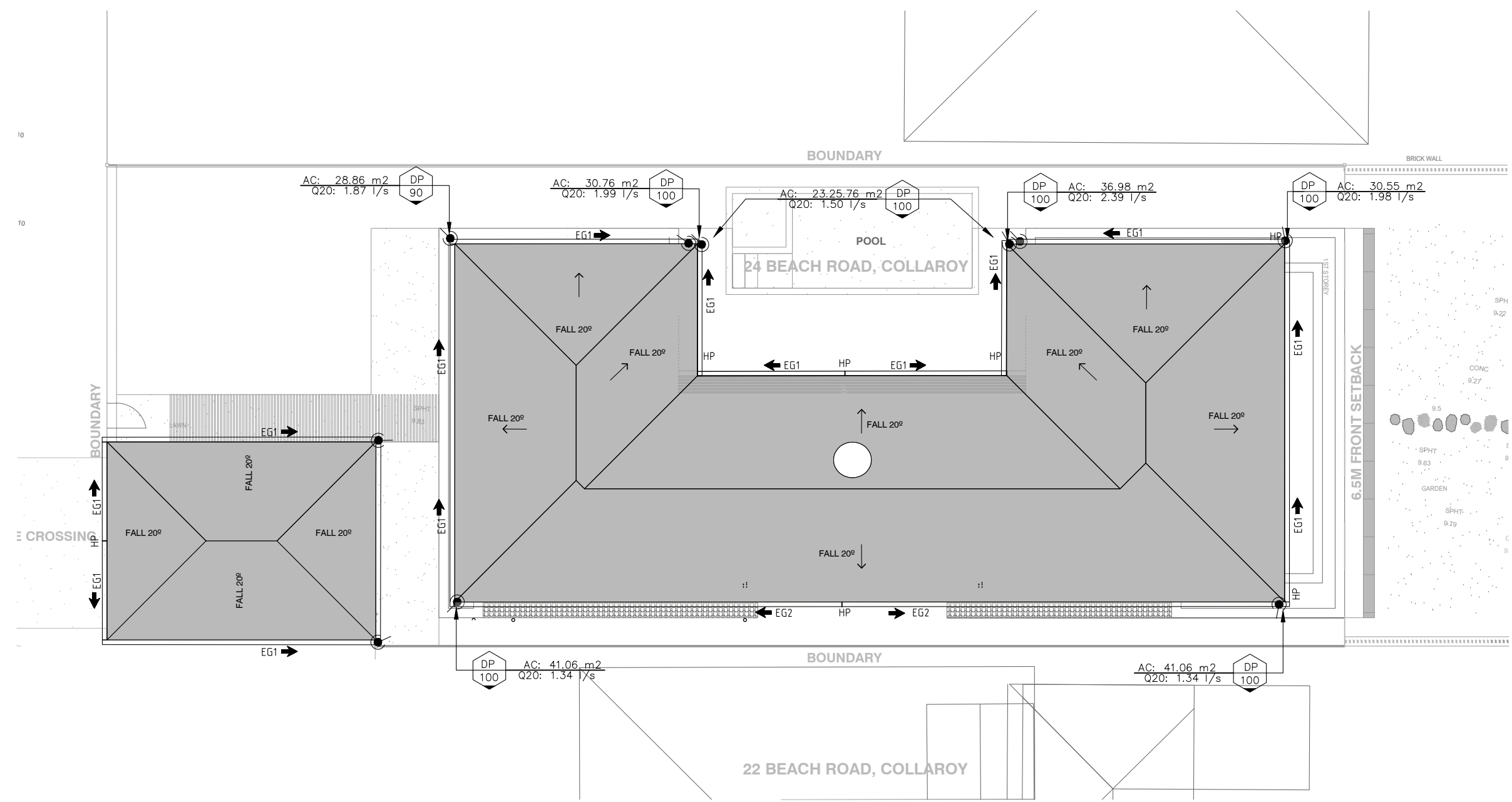
This design complies with:
AS3500.3:2021

24 BEACH ROAD COLLAROY			
PIPE LAYOUT			
Size	Status	Org No.	Rev.
A3	FOR DEVELOPMENT APPLICATION	P171413-DR-SW-001	2

NOMENCLATURE
 DP - DOWNPIPE
 EG - EAVES GUTTER
 LS - LEVEL SPREADER
 BG - BOX GUTTER REFER TO DETAIL 1 TABLE 1
 RWH - RAINWATER HEAD
 Ac - PLAN CATCHMENT AREA EXCLUDING ROOF PITCH
 Q20 - 20YR 5 MINUTE ARI FLOW RATE
 Q100 - 100YR 5 MINUTE ARI FLOW RATE

GUTTER SIZING
 RWH DESIGNED TO ARI (100YR:230mm/hr)
 EAVE GUTTER DESIGNED TO ARI (20YR:181mm/hr)
 EG1 - MIN CSA 7,800 mm²

LEGEND
 DOWNPIPE TYPE AND DIAMETER
 DIRECTION OF FALL
 DP



PLAN 3
 ROOF LAYOUT
 1:100

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	0	DD	30/10/2024	APPROVED FOR DA SUBMISSION

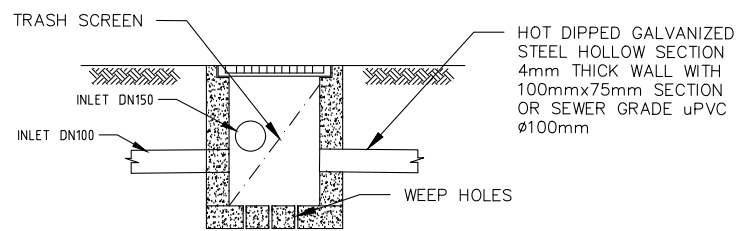
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APPROVED	LES	DATE	30/10/2024



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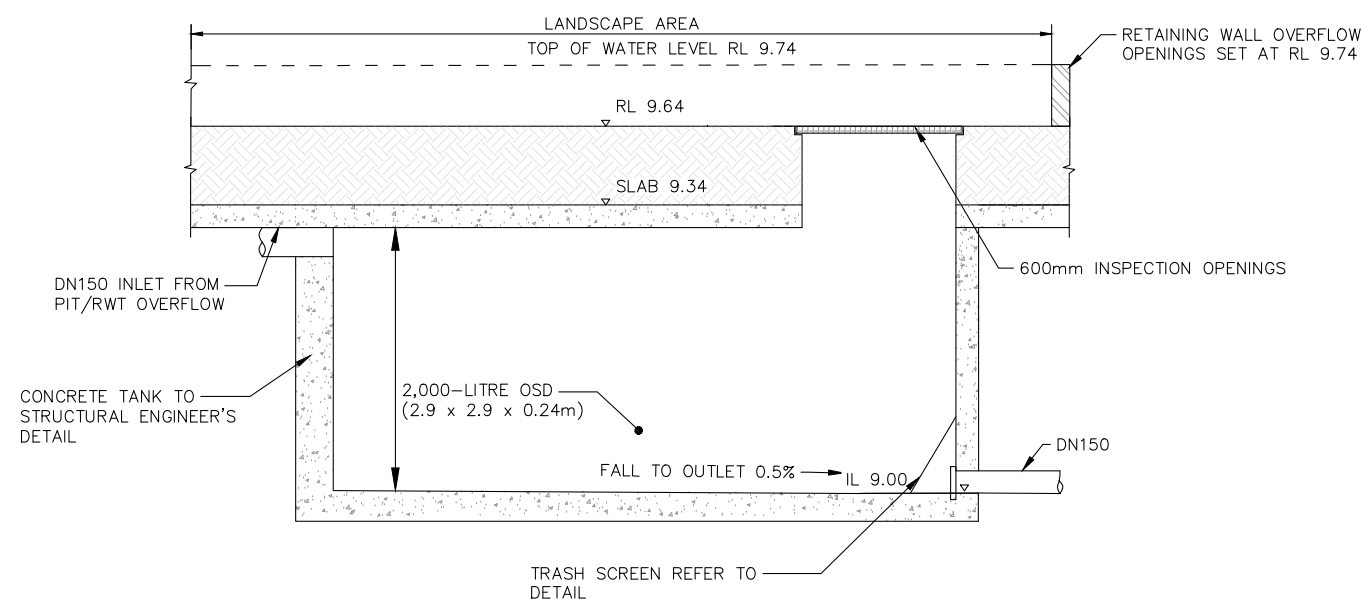
24 BEACH ROAD COLLAROY			
ROOF LAYOUT & RAINWATER HEAD DETAIL			
Size	Status	Drng No.	Rev.
A3	FOR DEVELOPMENT APPLICATION	P171413-DR-SW-002	0



DETAIL 1
450 SQUARE MEDIUM DUTY PIT
 NOT TO SCALE

NOTES:

- 'LYSAGHT' MAXIMESH RH3030 (HOT DIPPED GALVANISED) OR EQUIVALENT.
- MAXI MESH SCREENS MUST BE PLACED SUCH THAT THE LONG AXIS OF THE OVAL SHAPED HOLES ARE ORIENTATED HORIZONTALLY WITH THE PROTRUDING LIP ANGLED UPWARDS AND FACING TOWARDS THE OUTLET
- 20DIA AT 150 SPACING AT BASE OF SUMP. BEDDING TO BE 100 THICK SAND/GRAVEL MATERIAL.

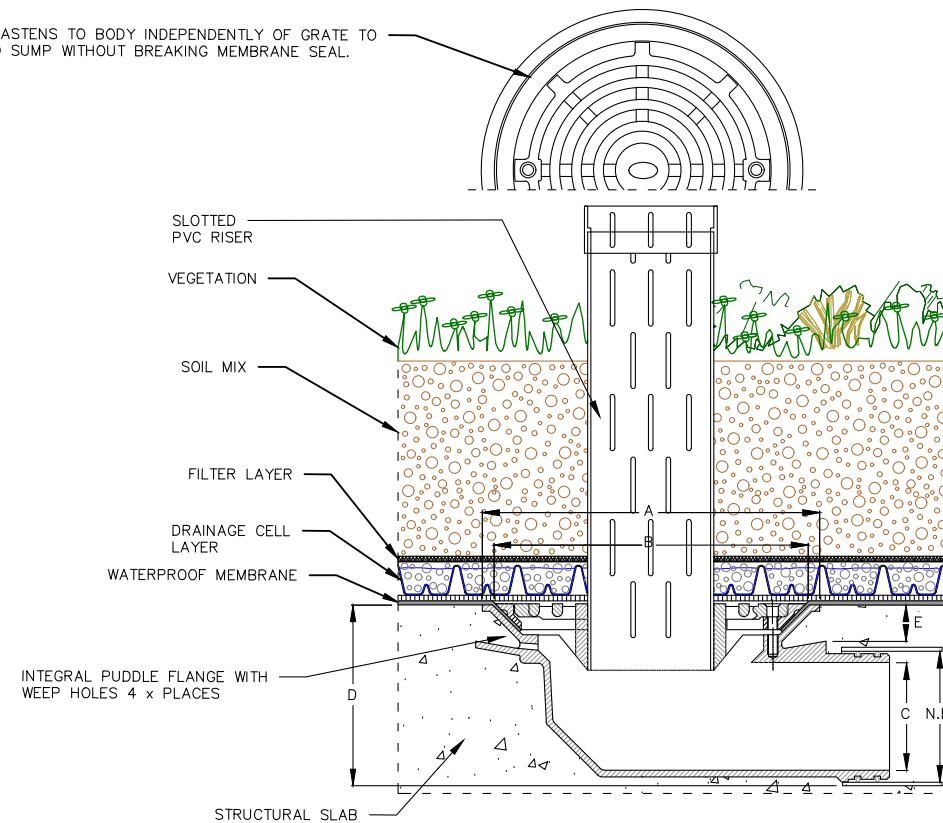


DETAIL 2
OSD AND BOUNDARY PITS DETAILS
 NOT TO SCALE

NOTES:

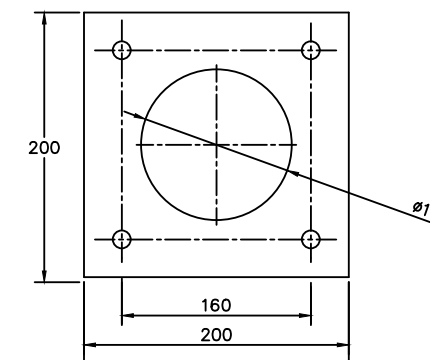
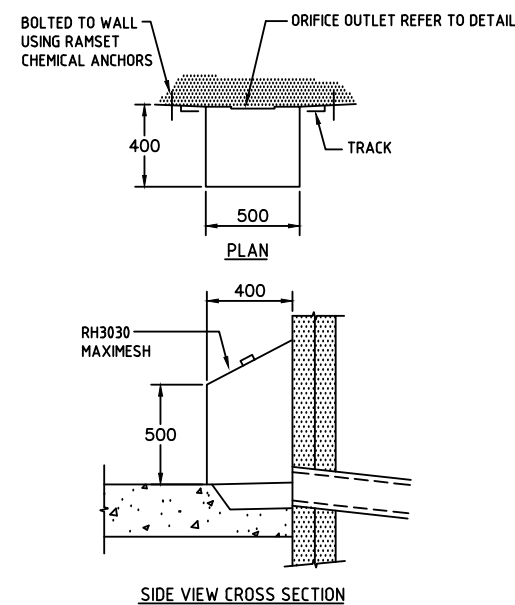
- 'LYSAGHT' MAXIMESH RH3030 (HOT DIPPED GALVANISED) OR EQUIVALENT.
- MAXI MESH SCREENS MUST BE PLACED SUCH THAT THE LONG AXIS OF THE OVAL SHAPED HOLES ARE ORIENTATED HORIZONTALLY WITH THE PROTRUDING LIP ANGLED UPWARDS AND FACING TOWARDS THE OUTLET
- 20DIA AT 150 SPACING AT BASE OF SUMP. BEDDING TO BE 100 THICK SAND/GRAVEL MATERIAL.

MEMBRANE RING FASTENS TO BODY INDEPENDENTLY OF GRATE TO ALLOW ACCESS TO SUMP WITHOUT BREAKING MEMBRANE SEAL.



N.B.	A	B	C	D	E
100	260	240	62	140	28

DETAIL 3
PLANTER BOX OUTLET
 NOT TO SCALE



3mm THICK STAINLESS STEEL SECURELY FIXED TO OSD WALL WITH 4 OFF 12mm DYNA BOLTS

ORIFICE PLATE
 NOT TO SCALE

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Scale
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APPROVED	LES	DATE	14/11/2024



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 AS3500.3:2021

24 BEACH ROAD COLLAROY			
DETAILS			
Size	Status	Drwg No.	Rev.
A3	FOR DEVELOPMENT APPLICATION	P171413-DR-SW-100	2

LEGEND

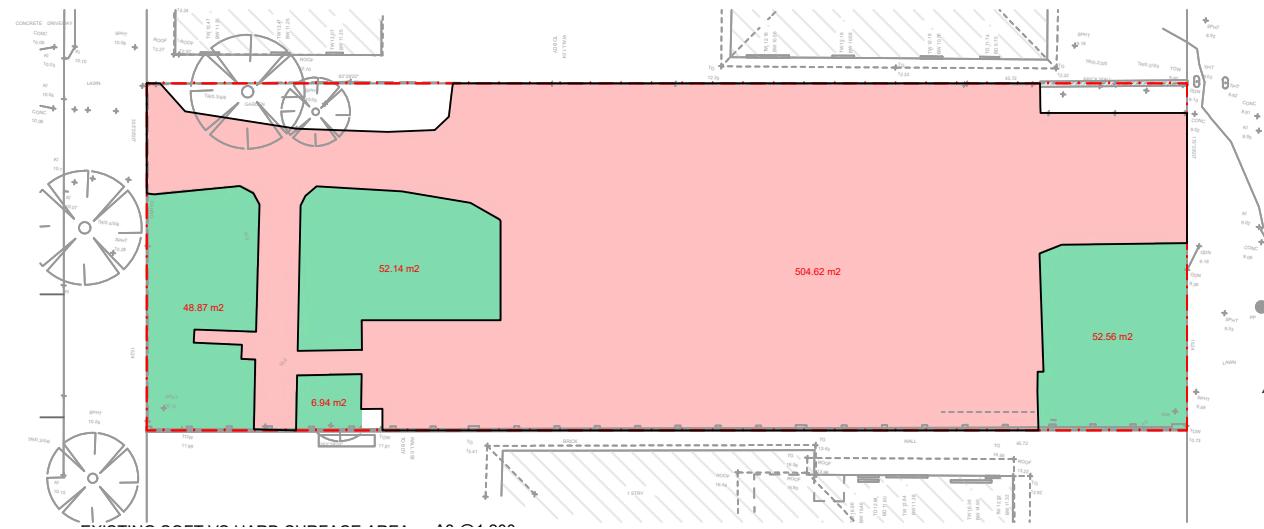
- PERVIOUS
- IMPERVIOUS

EXISTING

SITE AREA: 696.80 m²
 PERVIOUS: 192.18 m²
 IMPERVIOUS: 504.62 m²

PROPOSED

SITE AREA: 696.80 m²
 PERVIOUS : 327.69 m²
 IMPERVIOUS : 369.11 m²



PLAN 4 SITE AREAS – EXISTING
 NTS

TABLE 1 – PSD (400 l/s per Ha), POST DEVELOPMENT FLOWS

ARI	PSD STATE OF THE NATURE (l/s)	POST DEVELOPED FLOWS (l/s)		
		OSD (l/s)	BYPASS OSD (l/s)	TOTAL
0.2EY	23	14	0	14
20 YEAR	23	14	0	14
100 YEAR	27.8	23	0	23

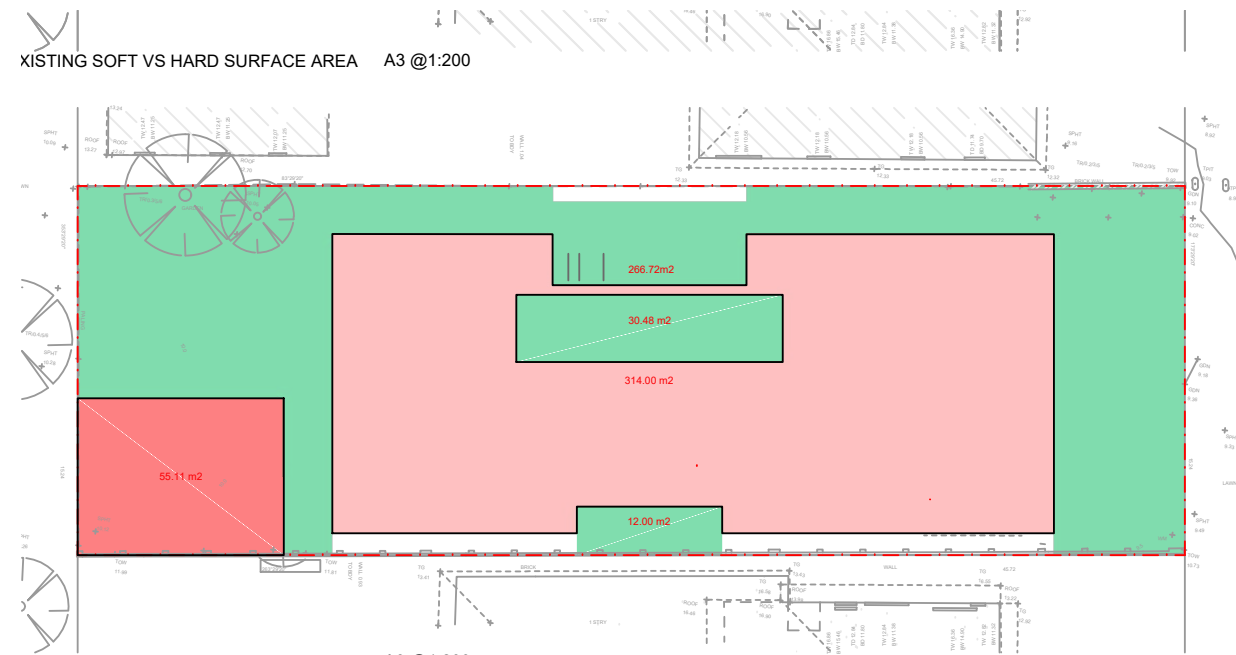
AS PER CONDITION 9.10.5 OF NORTHERN BEACH COUNCIL'S WATER MANAGEMENT FOR DEVELOPMENT POLICY:
 STORAGE IN LANDSCAPE AREA REQUIRES FIRST 20% VOLUME IN A AREA ABLE TO TOLERATE FREQUENT INUNDATION AND ADDITIONAL 20% VOLUME TO COMPENSATE FOR LOSS DUE TO VEGETATION GROWTH AND CONSTRUCTION INACCURACIES

TOTAL STORAGE REQUIRED = 8,444L
 TOTAL STORAGE PROVIDED = 10,133L
 MADE UP OF THE FOLLOWING
 STORABLE FREQUENCY WETTABLE ZONE REQUIRED = (20% OF REQUIRED OSD) = 20% OF 8,444L = 1,689L

STORABLE FREQUENCY WETTABLE ZONE PROVIDED
 OSD UNDER UNDERGROUND OF SIZE (Width:2.6m Length: 2.6m Height: 0.3m) = 2.6x2.6x0.3 = 2,000L

LANDSCAPE AREA REQUIRED STORAGE = (20% OF 8,444L) + 8,444L
 LANDSCAPE AREA REQUIRED STORAGE = 1,689L + 8,444L = 10,133L
 LANDSCAPE AREA PROVIDED STORAGE = 8,133L

TOTAL STORAGE PROVIDED = 2,000L + 8,444L = 10,400L



PROPOSED SOFT VS HARD SURFACE AREA A3 @1:200

PLAN 5 SITE AREAS – PROPOSED
 NTS

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1	AB	08/11/2024	APPROVED FOR DA SUBMISSION	FRM
0	DD	30/10/2024	APPROVED FOR DA SUBMISSION	LES

Scale
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APPROVED	LES	DATE	08/11/2024

Stellen Consulting ABN 61 149 095 189

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 AS3500.3:2021

24 BEACH ROAD COLLARROY			
SITE AREAS			
Size	Status	Drng No.	Rev.
A3	FOR DEVELOPMENT APPLICATION	P171413-DR-SW-200	0